

No.

9400001



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Agripro Seeds, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Sonja'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 30th day of November in the year of our Lord one thousand nine hundred and ninety-four.

Attest:

Kenneth A. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Mike Egan
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) <i>Hybrid Tech US, a Monsanto Company</i> AgriPro Seeds, Inc. <i>AAA 6 Oct 1994</i>		2. TEMPORARY DESIGNATION N87-0306	3. VARIETY NAME SONJA
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 6700 Antioch Shawnee Mission, Kansas 66204		5. PHONE (Include area code) 913-384-4940 (KS) 303-532-3721 (CO)	FOR OFFICIAL USE ONLY PVPO NUMBER 9400001
6. GENUS AND SPECIES NAME <u>Triticum aestivum</u>	7. FAMILY NAME (Botanical) Gramineae	FILING DATE Oct. 4, 1993 TIME <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
8. KIND NAME Hard Red Spring Wheat	9. DATE OF DETERMINATION July 1989	AMOUNT FOR FILING \$ 2325.00 DATE Sept. 10, 1993	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation		AMOUNT FOR CERTIFICATE \$ 275.00 DATE Oct. 12, 1994	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware		12. DATE OF INCORPORATION February 8, 1989	Mark J. Messmer Hybrid Tech US 5912 North Meridian Wichita KS 67204
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS			
R.E. Heiner 6700 Antioch Shawnee Mission, Kansas 66204		Chris Bruns or Joe Smith 806 N. Second Street Berthoud, CO 80513 303-532-3721 316 755 7707	
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED			
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)			
b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement. <i>CGM 01 Jun 1998</i>			
c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.) <i>fax: 316 755 0072</i>			
d. <input checked="" type="checkbox"/> Exhibit D, Additional Description of Variety.			
e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership. <i>Exhibit F: Quality & Agronomic Data</i>			
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) <input checked="" type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input type="checkbox"/> No			
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input checked="" type="checkbox"/> Foundation <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Certified	
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No			
19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input checked="" type="checkbox"/> No			
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF APPLICANT <i>RE Heiner</i>		DATE August 25, 1993	
SIGNATURE OF APPLICANT		DATE	

EXHIBIT A.

ORIGIN AND BREEDING HISTORY OF SONJA

Sonja originated from the cross 'HS81-0074/MN7357' which was made at Berthoud, Colorado in 1983. Selections were made from an F2 population of this cross at Berthoud in 1985. Selection criteria at this stage was short height, leaf and stem rust resistance. Single seed descent was used to advance these selections through the F3 and F4 generations in the Berthoud greenhouse. An F5 headrow of one of these selections was bulked from the 1986 selection nursery at Climax, Minnesota. The selection criteria in this nursery was short height, uniformity, foliar disease resistance and leaf rust resistance. This bulk was increased in a winter nursery in New Zealand and entered into yield trials in 1987 under the experimental designation 'N87-0306'.

Sonja (N87-0306) has been yield tested in AgriPro nurseries in the Red River Valley from 1987 to 1992. It has also been tested in the Spring Wheat Regional Nursery in 1991 and 1992. It was entered into North Dakota, South Dakota and Minnesota state tests in 1992.

In 1989, 80 headrows were grown in Berthoud, Colorado. In 1990, an additional 84 headrows were grown in Colorado along with a .2 acre initial seed increase. In 1991 a five acre breeder seed increase in Berthoud, Colorado produced 20,000 pounds of foundation seed.

Sonja has been uniform and stable since 1991 as observed in breeder seed and foundation seed production. Less than 0.5% of the plants were rogued from the registered seed field in 1992. The majority of the rogued variant plants consisted of approximately 95% slightly taller (3 to 5cm) wheat plants. Up to 1% total variant plants may be encountered in subsequent generations.

EXHIBIT B.**NOVELTY STATEMENT SONJA**

Sonja is most similar to the hard red spring wheat Wheaton. However, it can be easily distinguished by the following morphological characteristics:

- Sonja and Wheaton both have acuminate beaks, however Sonja's beak is significantly longer, (see 1991 & 1992 statistical data following pages).

A.N.O.V.A. BEAK LENGTH
 Sonja vs. Wheaton
 1991

TOTAL OBSERVATIONS: 50

	VAR	BEAKLENG
N OF CASES	50	50
MINIMUM	1.000	1.700
MAXIMUM	2.000	7.400
MEAN	1.500	4.174
STANDARD DEV	0.505	1.392

THE FOLLOWING RESULTS ARE FOR:
 VAR = SONJA 1.000

TOTAL OBSERVATIONS: 25

	VAR	BEAKLENG
N OF CASES	25	25
MINIMUM	1.000	4.000
MAXIMUM	1.000	7.400
MEAN	1.000	5.192
STANDARD DEV	0.000	0.994

THE FOLLOWING RESULTS ARE FOR:
 VAR = WHEATON 2.000

TOTAL OBSERVATIONS: 25

	VAR	BEAKLENG
N OF CASES	25	25
MINIMUM	2.000	1.700
MAXIMUM	2.000	5.000
MEAN	2.000	3.156
STANDARD DEV	0.000	0.899

DEP VAR:BEAKLENG N: 50 MULTIPLE R: 0.739 SQUARED MULTIPLE R: 0.546
 ADJUSTED SQUARED MULTIPLE R: 0.536 STANDARD ERROR OF ESTIMATE: 0.948

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
CONSTANT	7.228	0.424	0.000	.	17.052	0.000
VAR	-2.036	0.268	-0.739	.100E+01	-7.595	0.000

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	51.816	1	51.816	57.680	0.000
RESIDUAL	43.120	48	0.898		

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1991

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE FOR 50 CASES 1991
DEPENDENT VARIABLE IS BEAKLENG
GROUPING VARIABLE IS VAR

GROUP	COUNT	RANK SUM
Sonja 1.000	25	920.500
Wheaton 2.000	25	354.500

MANN-WHITNEY U TEST STATISTIC = 595.500
PROBABILITY IS 0.000
CHI-SQUARE APPROXIMATION = 30.214 WITH 1 DF

A.N.O.V.A. For BEAK LENGTH
 Sonja vs. Wheaton
 1992

TOTAL OBSERVATIONS: 50

	VAR	BEAKLENG
N OF CASES	50	50
MINIMUM	1.000	1.300
MAXIMUM	2.000	8.200
MEAN	1.500	3.990
STANDARD DEV	0.505	1.478

THE FOLLOWING RESULTS ARE FOR:
 VAR = SONJA 1.000

TOTAL OBSERVATIONS: 25

	VAR	BEAKLENG
N OF CASES	25	25
MINIMUM	1.000	3.000
MAXIMUM	1.000	8.200
MEAN	1.000	5.112
STANDARD DEV	0.000	1.084

THE FOLLOWING RESULTS ARE FOR:
 VAR = WHEATON 2.000

TOTAL OBSERVATIONS: 25

	VAR	BEAKLENG
N OF CASES	25	25
MINIMUM	2.000	1.300
MAXIMUM	2.000	4.600
MEAN	2.000	2.868
STANDARD DEV	0.000	0.814

DEP VAR:BEAKLENG N: 50 MULTIPLE R: 0.767 SQUARED MULTIPLE R: 0.588
 ADJUSTED SQUARED MULTIPLE R: 0.579 STANDARD ERROR OF ESTIMATE: 0.959

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
CONSTANT	7.356	0.429	0.000	.	17.160	0.000
VAR	-2.244	0.271	-0.767	.100E+01	-8.277	0.000

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	62.944	1	62.944	68.509	0.000
RESIDUAL	44.101	48	0.919		



1992

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE FOR 50 CASES
DEPENDENT VARIABLE IS BEAKLENG
GROUPING VARIABLE IS VAR

GROUP	COUNT	RANK SUM
SONJA 1.000	25	924.000
WHEATON 2.000	25	351.000

MANN-WHITNEY U TEST STATISTIC = 599.000

PROBABILITY IS 0.000

CHI-SQUARE APPROXIMATION = 30.992 WITH 1 DF

U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE
 LIVESTOCK, MEAT, GRAIN & SEED DIVISION
 BELTSVILLE, MARYLAND 20705

EXHIBIT C
 (Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
 WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S) AgriPro Biosciences Inc.	FOR OFFICIAL USE ONLY
	PVPO NUMBER 9400001
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 6700 Antioch Shawnee Mission, KS 66204	VARIETY NAME OR TEMPORARY DESIGNATION SONJA

Place the appropriate number that describes the varietal character of this variety in the boxes below.
 Place a zero in first box (e.g. or) when number is either 99 or less or 9 or less.

1. KIND: 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:
 1 = SPRING 2 = WINTER 3 = OTHER (Specify) _____ 1 = SOFT 2 = HARD 3 = OTHER (Specify) _____
 1 = WHITE 2 = RED 3 = OTHER (Specify) _____

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:
 FIRST FLOWERING LAST FLOWERING

4. MATURITY (50% Flowering):
 NO. OF DAYS EARLIER THAN Equal to Bergen (HRSW) 1 = ARTHUR 2 = SCOUT 3 = CHRIS
 NO. OF DAYS LATER THAN 4 = LEMHI 5 = NUGAINES 6 = LEEDS 7=Marshall

5. PLANT HEIGHT (From soil level to top of head):
 CM. HIGH
 CM. TALLER THAN
 CM. SHORTER THAN 1 = ARTHUR 2 = SCOUT 3 = CHRIS
 4 = LEMHI 5 = NUGAINES 6 = LEEDS 7=Wheaton

6. PLANT COLOR AT BOOTING (See reverse): 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN
 7. ANTHUR COLOR: 1 = YELLOW 2 = PURPLE

8. STEM:
 Anthocyanin: 1 = ABSENT 2 = PRESENT Waxy bloom: 1 = ABSENT 2 = PRESENT
 Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT Internodes: 1 = HOLLOW 2 = SOLID
 NO. OF NODES (Originating from node above ground) CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:
 Anthocyanin: 1 = ABSENT 2 = PRESENT Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:
 Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER (Specify) _____ Flag leaf: 1 = NOT TWISTED 2 = TWISTED
 Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT
 MM. LEAF WIDTH (First leaf below flag leaf) CM. LEAF LENGTH (First leaf below flag leaf):

FORM GR-470-5 (REVERSE)

11. HEAD:

3 Density: 1 = LAX 2 = DENSE 3 = MIDDENSE 1 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) _____

4 Awedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

1 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER (Specify) _____

0 7 CM. LENGTH 1 1 MM. WIDTH

12. GLUMES AT MATURITY:

2 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.) 2 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.) 3 = WIDE (CA. 4 mm.)

2 Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE 3 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

1 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

2 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

3 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

1 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL 1 Cheek: 1 = ROUNDED 2 = ANGULAR

2 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG 2 Brush: 1 = NOT COLLARED 2 = COLLARED

-- Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK

3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

6 8 MM. LENGTH 3 5 MM. WIDTH 3 5 GM. PER 1000 SEEDS

17. SEED CREASE:

1 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI' 1 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Moderately Susceptible, 4 = Moderately Resistant)

2 STEM RUST (Races) field races 4 LEAF RUST (Races) field races 0 STRIPE RUST (Races) 0 LOOSE SMUT

0 POWDERY MILDEW 0 BUNT 0 OTHER (Specify) _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Moderately Susceptible, 4 = Moderately Resistant)

0 SAWFLY 0 APHID (Byav.) 0 GREEN BUG 0 CEREAL LEAF BEETLE

0 OTHER (Specify) _____ HESSIAN FLY RACES: 0 GP 0 A 0 B 0 C 0 D 0 E 0 F 0 G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Wheaton	Seed size	Wheaton
Leaf size	Wheaton	Seed shape	Wheaton
Leaf color	Krona	Coleoptile elongation	Wheaton
Leaf carriage	Wheaton	Seedling pigmentation	Wheaton

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.T. Briggie and L. P. Reitz, 1963, Classification of Triticum Species and Their Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) F.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Vernal Purity, contribution No. 29 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Measurements or any recognized color fan should be used to determine the leaf color of the described variety.

EXHIBIT D.**BOTANICAL DESCRIPTION OF SONJA**

Sonja is a hard red spring wheat bred and developed by AgriPro Biosciences Inc. Sonja is a high yielding, strong strawed, medium short semidwarf with medium-early maturity.

Juvenile growth habit is erect. Plant color is green with a recurved (some erect), twisted flag leaf. Auricle anthocyanin is absent and auricle hairs are present. Waxy bloom is present on the stem, flag leaf sheath and head. Head shape is tapering (some strap), awned and middense. Glumes are midlong and midwide with oblique shoulders and acuminate beaks. Seed shape is ovate with rounded cheeks. Seed crease is narrow and depth is shallow.

Sonja is well adapted to the states of North Dakota, South Dakota and Minnesota.

EXHIBIT E.**STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP**

AgriPro Biosciences Inc. is the applicant for protection in this case being:

- a) The incorporated business (registered in Delaware) for and within which regular employees have bred the named variety.
- b) The proprietary owner and intending commercial user of the variety.

EXHIBIT F.

QUALITY AND AGRONOMIC DATA

Over-Year Summary Red River Valley	page 1.
Trial Summary Data Sonja vs. Grandin.	page 2.
Trial Summary Data Sonja vs. 2375	page 3.
Trial Summary Data Sonja vs. Butte 86	page 4.
Trial Summary Data Sonja vs. Bergen	page 5.
Stem and Leaf Rust Ratings	page 6.
Quality Data Sonja vs. Len	page 7.
Quality Data Sonja vs. Bergen	page 8.

ACRIPRO SPRING WHEAT DATA - OVER-YEAR SUMMARY FROM RED RIVER VALLEY SITES, 1990-92

VARIETY	YIELD - BU/A		% OF BGN	TV AVE	HD AVE	HT AVE	LS AVE	FD AVE	TS AVE	LEAF RUST				% PROT.		
	90	91								92	91	92	91		92	
BERGEN	71.4	49.5	70.8	62.5	100	58.6	4.5	4.4	1.8	4.6	4	3	4	1	1	13.5
NORDIC	70.8	46.2	76.0	62.5	100	60.0	5.6	6.0	2.3	3.9	3	4	4	1	6	12.7
KRONA	70.0	47.2	71.9	61.5	98	56.8	5.6	4.3	1.3	4.1	3	2	4	2	2	13.1
SONJA	68.9	49.7	69.7	61.5	98	58.7	4.3	4.1	1.0	3.9	3	2	4	1	1	13.9
NORWA*	-	46.8	72.3	61.5	98	58.5	4.6	6.0	2.0	4.0	3	1	1	2	2	13.4
2370*	-	48.2	69.9	61.3	98	58.8	3.5	5.5	2.7	4.4	8	2	2	3	2	14.2
2375	68.7	52.7	63.9	60.9	97	60.0	3.1	5.7	2.2	5.6	8	1	1	1	1	14.1
DALEN	71.9	47.3	66.6	60.5	97	59.2	3.4	4.3	1.0	3.6	8	1	1	1	1	14.3
NE7-0348	65.2	48.5	71.5	60.4	97	58.7	4.3	4.8	1.3	3.6	8	2	3	1	1	14.6
BUTTE 86	68.1	50.2	62.8	59.4	95	60.5	2.3	7.2	2.1	4.9	8	4	5	1	6	14.4
FJELD	72.2	48.9	59.5	59.1	95	57.9	3.7	5.0	1.5	6.1	8	3	4	1	8	13.0
VANCE	63.2	47.4	68.1	58.4	93	58.2	5.2	6.6	3.5	4.7	6	1	1	2	2	13.9
WHEATON	67.4	46.6	63.6	57.9	93	56.6	5.4	4.6	2.8	4.8	4	1	1	1	6	13.3
GRANDIN	63.3	48.5	64.8	57.8	92	60.1	3.2	6.5	1.8	5.0	8	2	2	2	2	14.7
SIDA	65.1	46.3	65.1	57.6	92	58.7	3.9	8.0	2.9	5.1	8	3	4	2	2	14.4
2371*	-	44.6	63.9	56.4	90	58.8	4.5	5.3	1.2	4.0	5	1	1	1	1	14.6
GUS	64.5	45.0	57.6	54.6	87	58.9	4.1	7.0	2.1	5.3	8	2	2	2	3	15.2
TELEMARK	66.6	38.0	61.5	53.6	86	57.4	5.1	4.0	1.3	5.3	3	2	3	1	6	14.8
MARSHALL	66.5	39.3	59.8	53.6	90	58.0	5.9	4.5	2.4	4.9	4	4	6	1	6	13.1
LEN	62.0	42.0	57.9	52.8	84	58.3	5.1	6.1	2.0	6.3	8	2	2	2	2	14.7
MINNPRO	61.4	38.6	63.0	52.8	84	56.6	5.6	5.9	2.9	4.7	8	2	2	1	1	14.5
NO. OF LOCS.	3.0	4.0	3.0	10.0		9.0	9.0	3.0	3.0	4.0	2					

* - NOT TESTED IN 1990, ADJUSTED FOR AVERAGES
 TS = TAN SPOT FUSION TEST

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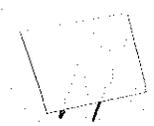
AGRIPRO SEEDS
HARD RED SPRING WHEAT TRIAL SUMMARY
OVER LOCATIONS-1990 THRU 1992

VARIETIES: SONJA vs. GRANDIN

AREA	YIELD Bu/Ac		T. WT. lb/Bu		HEAD		DAYS		HEIGHT		CIB.	LOCS		LODGE		(1-9)
	SONJA	GRANDIN	SONJA	GRANDIN	SONJA	GRANDIN	SONJA	GRANDIN	SONJA	GRANDIN		SONJA	GRANDIN	SONJA	GRANDIN	
MN	12	59.4	54.5	11	58.6	59.6	12	53.0	51.5	5	75.2	85.4	7	3.7	3.6	
ND	12	66.0	59.7	12	59.6	60.4	11	58.9	57.8	7	68.0	79.7	2	1.0	3.0	
SD	11	51.8	48.3	11	57.1	58.1	3	59.3	58.7	8	70.0	80.0	0	0.0	0.0	
ALL	35	59.3	54.4	34	58.5	59.4	26	56.2	55.0	20	70.6	81.3	9	3.1	3.4	

*The above data represents summaries of all available Public/Private Tests which were statistically significant (5%) and had C.V.'s less than 15.0%.

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AGRIPRO SEEDS
HARD RED SPRING WHEAT TRIAL SUMMARY
OVER LOCATIONS-1990 THRU 1992

VARIETIES: SONJA vs. 2375

AREA	YIELD Bu/Ac		T. WT. lb/Bu		HEAD	DAYS	HEIGHT		cm.	LOCS	LODGE		(1-9)
	LOCS	SONJA	SONJA	2375			LOCS	SONJA			SONJA	2375	
MN	12	59.4	58.8	59.5	12	53.0	51.5	5	75.2	80.8	7	3.7	4.1
MT	1	76.6	68.3	60.8	1	58.0	58.0	1	74.0	71.0	0	0.0	0.0
ND	12	66.0	61.6	60.7	11	58.9	57.0	7	68.0	74.0	2	1.0	3.5
SD	11	51.8	51.1	58.3	3	59.3	57.5	8	70.0	77.5	0	0.0	0.0
ALL	36	59.8	57.6	59.6	27	56.3	54.7	21	70.8	76.8	9	3.1	4.0

*The above data represents summaries of all available Public/Private Tests which were statistically significant (5%) and had C.V.'s less than 15.0%.

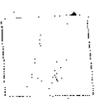
AGRIPRO SEEDS
 HARD RED SPRING WHEAT TRIAL SUMMARY
 OVER LOCATION-1990 THRU 1992

VARIETIES: SONJA vs. BUTTE 86

AREA	YIELD Bu/Ac		T.WT. lb/Bu		HEAD		Days		HEIGHT cm.		LODGE				
	LOCS	SONJA	BUTTE 86	LOCS	SONJA	BUTTE 86	LOCS	SONJA	BUTTE 86	LOCS	BERGEN	BUTTE86			
CN	1	91.3	87.1	0	0.0	0.0	0	0.0	0.0	1	88.0	102.0	1	6.0	4.0
MN	13	59.7	57.9	12	58.7	59.3	13	53.3	50.7	6	76.5	84.0	8	3.4	3.6
MT	2	33.8	32.7	1	62.7	62.8	2	51.5	51.0	2	59.0	70.5	0	0.0	0.0
ND	18	62.4	57.5	18	59.7	60.5	17	57.9	55.5	13	69.7	80.5	4	1.3	2.8
SD	14	52.6	49.7	14	57.6	58.9	6	56.7	54.2	11	68.3	81.7	0	0.0	0.0
ALL	48	58.2	54.9	45	58.9	59.7	38	55.8	53.4	33	70.4	81.6	13	2.9	3.4

STATES:

Note: The above data represents summaries of all available Public/Private Tests which were statistically significant (5%) and had C.V.'s less than 15.0%.



AGRIPRO SEEDS
 HARD RED SPRING WHEAT TRIAL SUMMARY
 OVER LOCATION-1990 THRU 1992

VARIETIES: SONJA vs. BERGEN

AREA	YIELD Bu/Ac		T.WT. lb/Bu		HEAD		Days		HEIGHT cm.		LODGE		
	LOCS	SONJA	SONJA	BERGEN	LOCS	SONJA	BERGEN	LOCS	SONJA	BERGEN	SONJA	BERGEN	
MN	12	59.4	60.5	58.6	12	53.0	52.9	5	75.2	75.8	7	3.7	2.9
MT	2	94.8	88.5	61.4	2	60.0	60.0	2	79.0	75.0	0	0.0	0.0
ND	12	66.0	62.4	59.6	11	58.9	58.1	7	68.0	70.0	2	1.0	2.5
SD	11	58.1	51.0	57.1	3	59.3	59.7	8	70.0	70.5	0	0.0	0.0
ALL	37	61.2	59.8	58.6	28	56.5	56.2	22	71.4	72.0	9	3.1	2.8

Note: The above data represents summaries of all available Public/Private Tests which were statistically significant (5%) and had C.V.'s less than 15.0%.

STEM AND LEAF RUST RATINGS
CEREAL RUST NURSERY* 1991-1992

<u>VARIETY</u>	<u>STEM RUST</u>		<u>LEAF RUST</u>	
	<u>1992</u>	<u>1991</u>	<u>1992</u>	<u>1991</u>
Butte 86	20RMR	20MR-MS	10VR	10MS
Stoa	TR	TR	10VR	5MR
Era	TMR	TMR	10VR	30S
Sonja	20RTRMR	TR	5VR	5MS

*St. Paul, Minnesota - Uniform Regional Reports

AGRIPRO WHEAT
HARD RED SPRING WHEAT
SONJA VS BERGEN

YEAR: 1992

FLOUR/WHEAT QUALITY

BAKING QUALITY

YEAR-LOC	TEST WT	WHT PROT	FLR PROT	HRD	FLR YLD	ASH	MIXOGRAM			TOL	ABS %	MIX TIME	LOAF VOL	CRUMB			OVER ALL	COMMT
							PK TIME	PK HT	PK N.U.					GR	TX	COOL		
lb/Bu	14%mb	14%mb	14%mb	R	%	R	min	N.U.	mm	%	min	cc	R	R	R	R	R	
SONJA																		
92-MW	57.9	13.0	11.8	6	108	.500	2.50	5.5	999	5	61.0	5	780	4	5	5	3	57
91-ST	59.9	14.6	13.8	4	73	.492	3.25	5.8	1156	4	65.0	4	930	5	3	3	2	41
90-TM	61.1	13.8	12.6	3	86	.524	3.00	5.5	1218	4	67.0	4	1010	4	3	3	2	39
90-ST	61.8	14.5	13.1	4	105	.420	3.50	5.5	1259	4	66.0	4	1070	4	3	2	2	37
90-BP	60.8	13.7	12.2	4	97	.467	3.50	6.3	1269	5	67.0	3	1110	3	2	2	2	35
89-TM	61.9	14.9	12.7	4	98	.389	4.00	5.3	1062	5	66.0	4	1200	3	4	3	2	47
89-BP	59.9	16.0	14.4	2	90	.399	4.50	5.5	969	3	71.0	1	1290	1	5	2	2	34
89-ST	61.0	14.6	12.9	5	97	.364	4.25	5.5	1118	2	66.0	5	1110	3	3	3	2	38
87-TM	61.9	13.7	12.5	3	00	.000	3.00	6.0	1375	2	66.0	1	1200	1	4	3	3	33
AVERAGE	60.7	14.3	12.9	3.9	94	.444	3.50	5.7	1158	3.8	66.1	3.4	1078	3.1	3.6	2.9	2.2	40
BERGEN																		
92-MW	57.5	12.8	11.9	6	100	.492	2.00	5.3	841	6	61.0	5	730	5	5	5	3	61
91-ST	59.5	14.8	13.8	4	75	.505	2.25	6.0	638	7	65.0	4	900	5	3	2	2	49
90-BP	59.7	13.0	12.1	4	97	.442	2.75	5.5	877	7	66.0	4	1050	5	3	2	2	47
90-ST	61.3	13.7	12.5	5	97	.439	2.50	5.5	586	7	65.0	5	1000	6	3	2	2	51
90-TM	62.0	13.0	12.2	4	92	.465	2.50	5.3	643	7	67.0	4	1020	4	4	3	2	51
89-ST	61.2	13.5	12.0	6	94	.398	4.50	5.0	1000	2	63.0	8	1070	4	4	3	2	44
89-TM	61.8	14.2	12.8	4	104	.412	5.00	4.8	1282	3	66.0	4	1120	5	3	2	2	38
89-BP	61.8	14.7	13.4	4	98	.429	4.75	4.8	1028	2	68.0	4	1180	3	3	2	2	36
87-TM	61.7	12.9	12.1	4	00	.000	4.50	4.7	1540	2	62.0	5	1140	2	3	2	3	34
AVERAGE	60.7	13.6	12.5	4.6	95	.448	3.42	5.2	937	4.8	64.8	4.8	1023	4.3	3.4	2.6	2.2	46

BILL OF SALE AND ASSIGNMENT

KNOW ALL MEN BY THESE PRESENTS that AGRIPRO BIOSCIENCES INC., a Delaware corporation (hereinafter referred to as "Seller"), pursuant to that certain Asset Purchase Agreement of even date herewith by and between Seller and AGR ACQUISITION CORPORATION, a Delaware corporation (hereinafter referred to as "Buyer") and for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, does hereby grant, bargain, sell, assign, convey and deliver unto Buyer, all of Seller's right, title and interest in and to the plant varieties owned/registered by Seller and more particularly set forth on Exhibit A attached hereto for which PVP Certificates have been issued by or may be pending before the U. S. Department of Agriculture.

TO HAVE AND TO HOLD UNTO PURCHASER, its successors and assigns forever.

IN WITNESS WHEREOF, Seller has executed this Bill of Sale and Assignment as of the 30th day of June, 1994.

AGRIPRO BIOSCIENCES INC.

BY: W.A. Zama
Title: President

STATE OF KANSAS, COUNTY OF JOHNSON

Before me, the undersigned, a Notary Public of the State and County aforesaid, personally appeared W.A. ZAMA with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence) and who, upon oath, acknowledged himself to be the PRESIDENT of Agripro Biosciences Inc., the within named bargainer, a corporation, and that he as such PRESIDENT, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as PRESIDENT.

WITNESS my hand and Notarial Seal at office the day and year above written.

Alma M. Weaver
Notary Public

My Commission Expires:
June 22, 1998

ALMA M. WEAVER
NOTARY PUBLIC
STATE OF KANSAS
My Appt. Exp. June 22, 1998

State of Delaware

Office of the Secretary of State

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "AGR ACQUISITION CORPORATION", CHANGING ITS NAME FROM "AGR ACQUISITION CORPORATION" TO "AGRIPRO SEEDS, INC.", FILED IN THIS OFFICE ON THE THIRTIETH DAY OF JUNE, A.D. 1994, AT 4:30 O'CLOCK P.M.

A CERTIFIED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS FOR RECORDING.



Edward J. Freel

SECRETARY OF STATE
AUTHENTICATION:

7169071

DATE:

07-01-94

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CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
AGR ACQUISITION CORPORATION

AGR Acquisition Corporation, a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

FIRST: that the Board of Directors of said corporation, by the unanimous written consent of its members filed with the minutes of the Board, adopted a resolution proposing and declaring advisable the following amendment to the Certificate of Incorporation of said corporation:

RESOLVED, that the Certificate of Incorporation of this corporation be amended by changing the Article thereof numbered "ARTICLE I" so that, as amended, said Article shall be and read as follows:

"ARTICLE I

Name

The name of the corporation (hereinafter called the 'Corporation') is Agripro Seeds, Inc."

SECOND: That in lieu of a meeting and vote of stockholders, the sole shareholder of the corporation has given unanimous written consent to said amendment in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 242 and 228 of the General Corporation Law of the State of Delaware.

FOURTH: That the capital of said corporation shall not be reduced under or by reason of said amendment.

IN WITNESS WHEREOF, said AGR Acquisition Corporation has caused this certificate to be signed by Gary T. Hancock, its President, and attested by Ann Steelman, its Secretary, this 30th day of June, 1994.

AGR ACQUISITION CORPORATION

BY: Gary T. Hancock
Gary T. Hancock, President

ATTEST:

BY: Ann Steelman
Ann Steelman, Secretary

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